

Azure Migration Guide

April 2023



Azure is trusted for its security, reliability, and scalability

Millions of organizations around the world rely on cloud services on Azure—[more than 95 percent of Fortune 500 companies](#) trust their business on Azure. You can bring your infrastructure to Azure, no matter what size your business is, with solutions for any starting point. Whether you use Windows Server, SQL Server, Linux, VMware, or SAP, Azure provides flexible migration paths to help you extend your technology and skills to the cloud.

This migration guide is based on customer best practices, resources, and tools to help move your on-premises resources to Azure. We'll share the lessons gathered from migrating millions of applications and server workloads into Azure. You'll learn how to assess your existing environment to plan and prioritize migration to Azure, then how to break down migration into actionable steps.



A proven approach to migration

The Azure Hero Offerings are built on years of experience in migrating applications and server workloads to Azure and adapting resources to meet IT objectives. The resulting lessons are distilled into the Cloud Adoption Framework for Azure, which provides the best practices that businesses need to successfully adopt Azure while maintaining continuity for internal operations and customers.

Cost-saving migration benefits

The Cloud Adoption Framework illustrates some of the many ways organizations can stay on top of optimizing costs:



Extended security updates. These allow up to three years of security updates for Windows and SQL Server 2012/R2 workloads, from the end date of support, at no additional cost when hosted on Azure in Azure Virtual Machines.



Reserved capacity. You can reduce your costs by up to 33 percent by reserving capacity at a discount. When combined with Azure Hybrid Benefit, you can save up to 80 percent.



Dev/test pricing. Save up to 55 percent versus list prices, eligible with an active Visual Studio subscription.



Azure Hybrid Benefit

With [Azure Hybrid Benefit](#), you can save money when you bring your Linux subscriptions and Windows Server and SQL Server subscriptions to Azure. On-premises Windows Server licenses covered with active Software Assurance or Windows Server Subscriptions can be used in Azure at a reduced compute rate. Customers save up to 40 percent on Windows Server virtual machines and even more for SQL Server. For Linux subscriptions, organizations can apply or convert existing Linux VMs and drop the software cost entirely. By combining Azure Hybrid Benefit with Azure Reserved Instances, companies can save up to 80 percent.

Cloud sustainability

As people and companies increasingly prioritize sustainability as a core value, Azure is leading the way with sustainable infrastructure. Here's how this is being achieved:

- The Azure cloud platform is **93 percent more energy efficient**, and up to 98 percent more carbon efficient than on-premises solutions.¹
- Azure has committed to **four key areas of environmental impact** on local communities: 100 percent renewable energy by 2025, water positive by 2030 to replenish more water than consumed by 2030, zero-waste certification by 2030, and net-zero deforestation from new construction.
- You can **track your company's carbon impact savings** with the Emissions Impact Dashboard for Azure.

[Learn more about Azure sustainability](#)

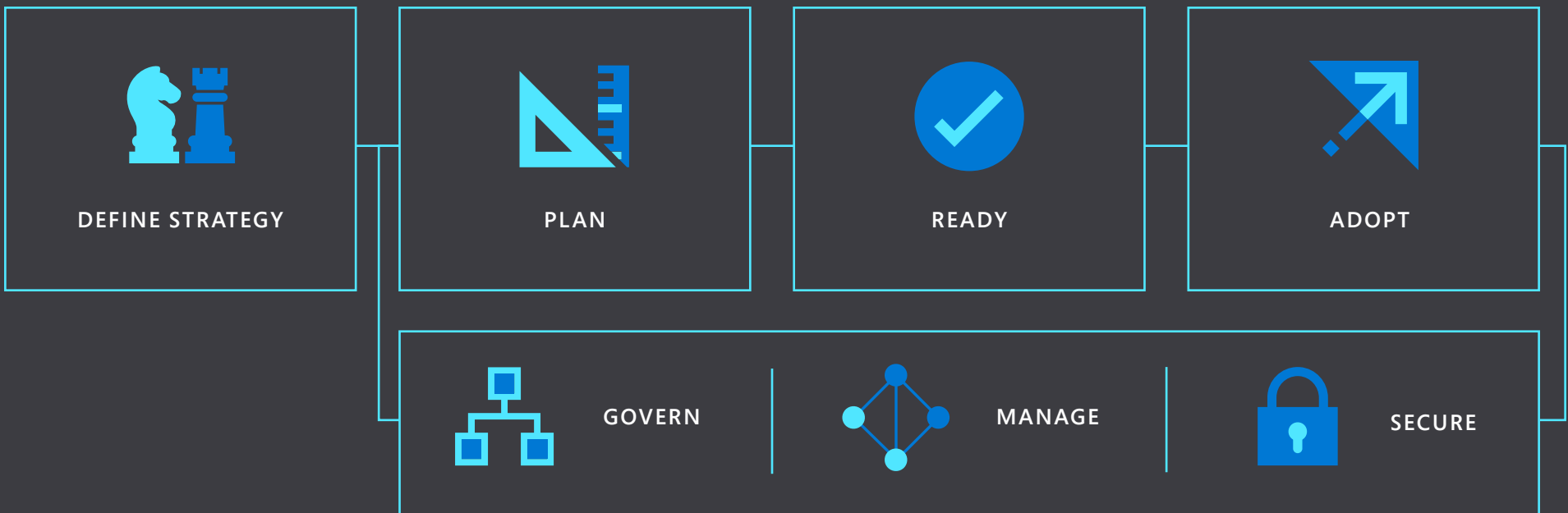


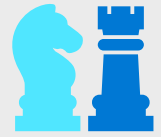
¹ Microsoft, *The Carbon Benefits of Cloud Computing* (white paper), 2020.

Phases

The cloud adoption process has four primary phases: Strategy, Plan, Ready, and Adopt.

- **Strategy.** Define your goals, identify potential business impacts, and frame the benefits of cloud adoption.
- **Plan.** Turn your goals into an implementation plan and timeline.
- **Ready.** Establish a framework with landing zones, workload prioritization, and adoption target.
- **Adopt.** Start deploying your prioritized workloads and applications to the cloud, whether your workloads will be migrated (lift-and-shift) or modernized (refactored or rearchitected).





The *strategy* phase sets the stage for a successful migration of a datacenter environment, reducing the risk of business disruption by using a structured process. A successful first migration will further enable an organization to tackle complex and important workloads.

When defining a cloud business strategy, consider business impact, turnaround time, global reach, performance, and more. Below are key areas on which to focus:

- Which applications can migrate to Azure, and which should remain on-premises?
- How does an organization handle the services used by each application?
- What are the dependencies between applications that will define those that move and those that impose constraints?
- What is the expected impact on the network?
- Will the migration require changes to user access authentication and authorization?
- Which databases do the applications depend on, and where should they be located?
- How can an organization stay compliant as versions near the end of support?



The *plan* phase turns the goals of your cloud adoption strategy into actions. In this stage, focus on these two steps:

- 01 Create a cloud adoption plan.** Develop a plan where prioritized workloads are defined and then aligned with business outcomes. With each initial inventory of IT assets and systems in hand, consider which workloads and apps are appropriate for migration, modernization, or a hybrid solution. During this process, it is advisable to proceed incrementally, application by application. [Azure Migrate](#) can help with the assessment and prioritization of Linux and Windows-based infrastructure, virtual desktop infrastructure (VDI), applications, and data by identifying which workloads are cloud-ready.
- 02 Rationalize the digital estate.** A digital estate is the collection of IT assets that power business processes and support operations. *Cloud rationalization* of the digital estate begins with an inventory of all the digital assets the organization currently owns; understanding the current digital estate maximizes returns and minimizes risks by determining the best way to migrate or modernize each component to the cloud.

There are five options for cloud rationalization, sometimes referred to as the Five Rs:

01 **Rehost.** Also known as a *lift-and-shift migration*, a rehost effort moves a current state asset to the chosen cloud provider, with minimal change to overall architecture:

- Reducing capital expense
- Freeing up datacenter space
- Achieving rapid return on investment in the cloud

02 **Refactor.** Refers to the application development process of *refactoring* code to allow an application to deliver on new business opportunities:

- Leading to faster, shorter updates
- Benefiting from code portability
- Achieving greater cloud efficiency in resources, speed, and cost

03 **Rearchitect.** When aging applications are not compatible with full migration, they might need to be *rearchitected* to produce cost and operational efficiencies in the cloud or in a hybrid environment:

- Gaining application scale and agility
- Adopting new cloud capabilities more easily
- Using a mix of technology stacks

04 **Rebuild/renew.** Unsupported, misaligned, or outdated on-premises applications might be too expensive to carry forward. A *renewed* code base with a cloud-native design *rebuild* might be the most appropriate and efficient path:

- Accelerating innovation
- Building apps faster
- Reducing operational cost

05 **Replace.** Sometimes the best approach is simply to *replace* the current application with a hosted application that meets all functionality required in the cloud:

- Standardizing around industry best practices
- Accelerating adoption of business process-driven approaches
- Reallocating development investments into applications that create competitive differentiation or advantages

Ready



The *ready* phase establishes a cloud foundation or Adoption Target that can provide hosting for any adoption efforts of common denominators across 80 to 90 percent of cloud adoptions.

A *landing zone* is a basic building block of the cloud adoption environment and refers to any Azure resource provisioned and prepared to safely host a workload.

Each landing zone is part of a broader solution for organizing resources across a cloud environment. These resources include management groups, resource groups, and subscriptions, and Azure offers many services to help organize resources, control costs, or secure and manage an Azure subscription. Azure Cost Management also provides a few ways to predict, analyze, and manage costs.



There are two different options in the *adopt* phase: *migrate* or *modernize*. Migration can be a simple lift-and-shift approach, where workloads and data are moved to the cloud without significant restructuring. Modernization involves replanning and rebuilding your infrastructure to take full advantage of cloud innovation. Both approaches to cloud adoption have advantages.

The adopt phase: **Migrate**

The *migrate* option is employed with workloads that do not require or warrant significant investment in their creation before being moved to the cloud. The lift-and-shift approach is used here, but consider these factors:

- [Performance](#)
- [Price](#)
- [Security](#)
- [Management](#)

Consider executing migrations in iterative waves. Choose a reasonably sized set of workloads/applications for each wave and use automation to move them over. This enables IT teams and partners to work with application teams in a focused manner, increasing the opportunities for high-quality migration.

Strategy tips from the Microsoft Field

Inventory your apps and workloads, then carefully evaluate the difficulty and risk of migrating each one. This evaluation helps you prioritize and plan effectively.

Inventory by type

Sort your applications into basic categories:

- Custom applications
- Microsoft server applications (Exchange, Skype, SharePoint)
- Microsoft partner applications

Calculate application risk

Two factors drive migration risk: business impact and complexity.

Ask these questions:

- Consider the business impact: How important is the workload to your business operations?
- Score the complexity: How complicated is the application and how well does your team understand it?

Organizing inventory into basic categories of workloads and apps will help set the course for migration and upgrade paths:

- Custom applications, or line-of-business (LOB) applications, developed in-house
- Microsoft applications, including Microsoft Exchange and SharePoint, or workloads running on Remote Desktop Services
- Microsoft partner applications, such as SAP and Adobe, or other off-the-shelf partner applications

The adopt phase: **Modernize**

Modernize is the second option for the adopt phase; it may be useful for organizations that plan to take full advantage of the cloud. Modernization tends to increase agility as well as security, and it allows autoscaling on a global level. When adapting selected workloads to Azure, be sure to address the security and methods required to manage the environment for ongoing operations.

When moving each workload or application, evaluate all assets and establish a migration plan that may include prerequisites, such as identifying a landing zone or establishing quantitative factors like networking and compatibility. For applications, assess any process dependencies or business events for a workload. Make sure to balance performance and price in order to deliver the right experience within budget.

After all four phases have been taken into consideration, there are two important final concepts in the Cloud Adoption Framework that complete the equation: **governance and management**.

Governance

Governance is about understanding the risks businesses face when moving to the cloud. The governance concept is divided into five disciplines:

1. **Cost management** relates to who is accountable, how much is budgeted, and who will spin up new elements that will need to be paid.
2. The **security baseline** will cover all security aspects related to the projects.
3. **Resource consistency** reduces the number of operational tasks that require attention.
4. The **identity baseline** dictates who has access to the appropriate resources and enables them to do exactly what is needed in the cloud environment.
5. **Deployment acceleration** provides resource consistency alongside the identity baseline.

Ultimately, governance is really about deployment acceleration. This is a place where the **Azure Blueprints** can be advantageous to cloud adoption. Once all these guidelines are in place, provisioning added resources is as easy as a production line generating a product.

Start with a secure foundation



Azure provides **multilayered, state-of-the-art security** across datacenters, infrastructure, and operations. A team of more than 3,500 global cybersecurity experts work to safeguard your assets and data, as well as managing identities, keys, and certificates with centralized visibility.



Azure governance provides built-in and custom policies to set guardrails. Deploy fully governed environments to build and scale while maintaining control. Enforce and audit policies, create compliant controls, and monitor spend and accountability across your organization.



Azure Advisor offers actionable steps to help you optimize Azure resources for reliability, security, scaling, performance, and cost with personalized recommendations and best practices for usage.

Management

The final concept in the Cloud Adoption Framework is *management*, which focuses on understanding an organization's services and making sure that they have the right reporting and universally available architecture.

Making the most of the cloud means having the right management strategy, the right monitoring, and the right resiliency—that is the Cloud Adoption Framework for Azure.

Management tools and resources



[Microsoft Cost Management](#) helps you monitor, allocate, and optimize cloud costs with transparency, accuracy, and efficiency. Track your costs across both Azure and AWS in one dashboard.



[Azure Automanage](#) simplifies configuration of virtual machines anywhere, allowing your organization to automate operations for continuous security and management at scale.

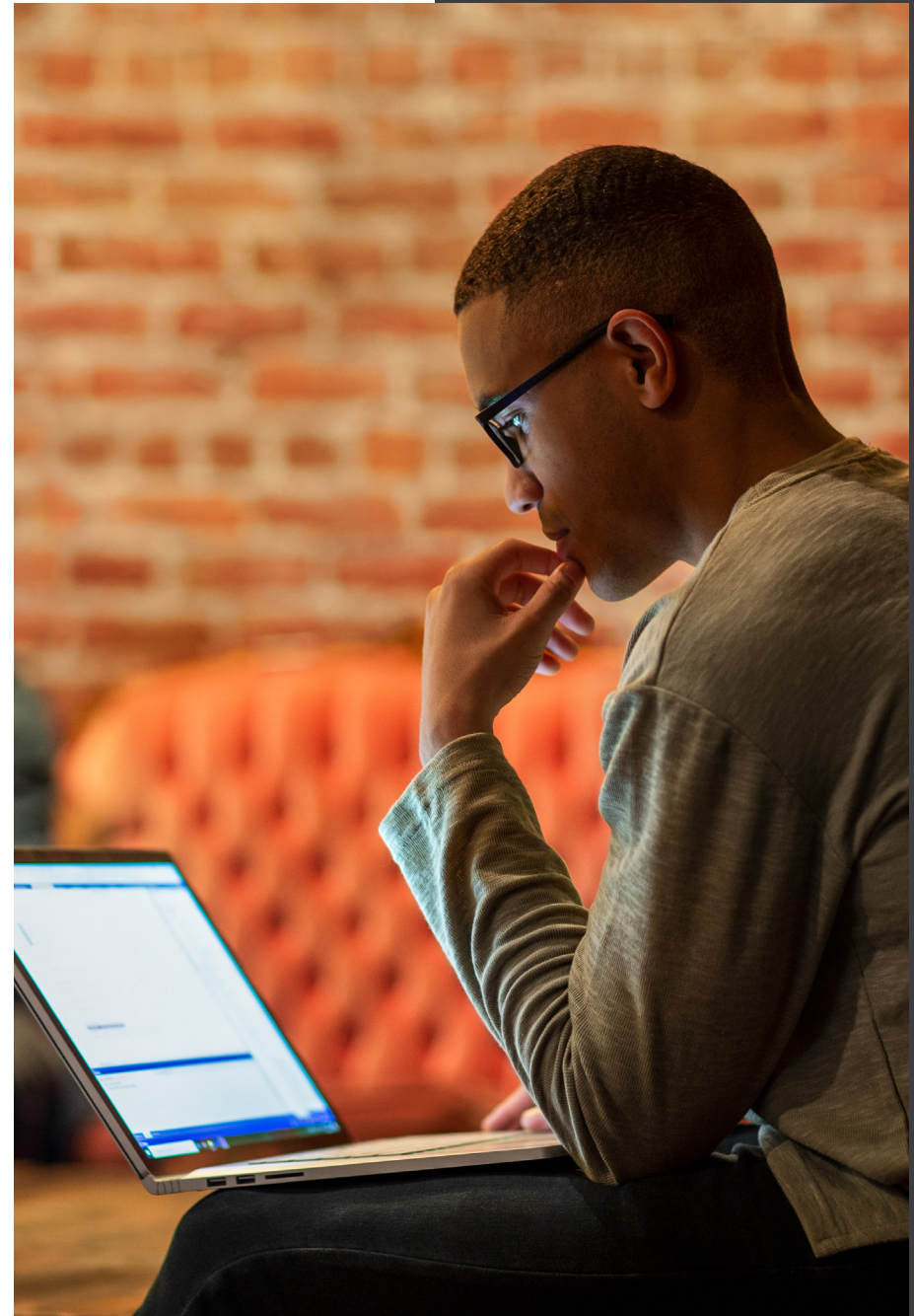


[Cloud Cost Optimization](#) offers tools and guidance designed to help you manage and optimize Azure costs. Learn how to understand and forecast bills, optimize workload costs, and control spending.

The Cloud Adoption Framework

The [Microsoft Cloud Adoption Framework for Azure](#) is an indispensable resource to help create and implement the business and technology strategies that any organization needs to succeed in the cloud. The framework provides best practices, documentation, and tools that cloud architects, IT professionals, and business decision makers need to achieve short- and long-term objectives.

Adoption starts with identifying a portfolio of workloads that may be hosted in the cloud. That portfolio will determine the level of hosting and organizational hierarchies required, as well as the types of support needed to operate, govern, and secure the cloud environment. Finally, identifying this portfolio will improve consistency throughout each phase of cloud adoption and, in turn, will provide a well-managed operating model that will inform activities throughout each phase of cloud adoption.



Foundation alignment of the Cloud Adoption Framework

A company's cloud adoption journey is built on a set of foundational decisions that will impact and influence the overall cloud journey. The Cloud Adoption Framework is suitable for any and every organization, but its implementation and timing will be specific to each customer's organizational needs.

The framework can be broken into multiple stages. Most IT projects have a number of *foundational layers* that must be documented and agreed upon by the organization and all participating parties. If IT is managed in-house, it can be relatively simple to identify the staff responsible for the current IT system and understand any potential blockers. If IT is outsourced, however, a contractual negotiation to move to cloud might be required before proceeding. In either scenario, understanding how to measure up against the questions being asked—and clearly documenting the answers—will give organizations a solid foundation for using the Cloud Adoption Framework to build a complete migration plan.

First foundational layer

Understand how Azure works. Taking time to understand how the product works is critical to its success. Given that cloud offers a vastly different experience than traditional on-premises interfaces, reaching this understanding can be daunting.

Second foundational layer

Understand initial concepts. Azure has foundational concepts like resource groups or subscriptions that need to be understood by all stakeholders involved in the migration. A basic understanding of Azure elements and concepts will ensure that the correct structure and approach are adopted early.

Third foundational layer

Review the portfolio. Creating a detailed plan of the workloads each organization plans to migrate—including the person or team accountable for each workload—is paramount. Once this has been accomplished, determine which supporting systems will be in place, and whether each workload is a suitable candidate for migration.

Fourth foundational layer

Define portfolio hierarchy to align the portfolio. The portfolio hierarchy provides a means to help align the portfolio and build a plan of execution so that cloud adoption is successful.

Fifth foundational layer

Establish a name and tagging standard across the portfolio.

Being able to clearly understand what the resource is, which part of the organization it belongs to, and the application it represents will help manage the life cycle of the resource more efficiently and cost effectively.

Sixth foundational layer

Create a resource organization design to implement

the portfolio hierarchy. This can help quickly identify and alleviate blockers in the adoption process through changes to policy or scope.

Final foundational layer

Map capabilities, teams, and RACI to fundamental concepts.

Using information already gathered, along with what is known as the Responsible, Accountable, Consulted, and Informed diagram (RACI), will provide a detailed picture of how the day-to-day activities for a migration can be achieved.

The importance of each of these layers will become increasingly apparent throughout the journey to the cloud. For instance, naming conventions employed for on-premises servers—as we saw in *layer five* above—can become a useful tool in executing migration plans.

Using proven tools and methodologies to educate on the Azure taxonomy will keep stakeholders fluent in the migration process, and it could prevent a great deal of ambiguity during the Cloud Adoption Framework process.

Migrating custom line-of-business applications to Azure

Nearly any organization on the planet—from large enterprises to small businesses—has at least one bespoke application lurking somewhere on a server. On the surface, these applications seem easy to move, but like any migration activity, careful planning is necessary.

For custom line-of-business applications, defining the portfolio of applications will begin to illustrate the complicated nature of these entities. Examining legacy business processes and systems could also reveal multiple challenges for any team trying to modernize the organization by bringing them to the cloud.

It is not uncommon to find a line-of-business app that was written by a developer many years earlier, and all that remains are the binaries of the application, running on an old server. It's not unusual to have a complete lack of source code and creaky servers running on archaic technology.

There are other situations where the application is relatively modern in terms of its existence but requires tight coupling of the tiers of service. Taking any of these custom line-of-business applications could require one of several different methods, depending on the portfolio workload discovery.

There are a few approaches to moving a custom line-of-business application to the cloud:

- [Migrate apps](#)
- [Modernize apps](#)
- [Migrate/upgrade apps](#)

These approaches map to more than just the custom line-of-business applications, but they are applicable *specifically* to custom line-of-business applications due to the unique nature of each application.

Migrate apps

Migrating apps or “lift-and-shift” is the quickest approach to moving to the cloud, as organizations can move existing line-of-business applications to the cloud without restructuring. Utilizing tools like [Azure Site Recovery](#), workloads can be replicated to Azure and tested in a sandboxed environment. If the system operates and performs per expectations, then a simple cutover can be performed when all supporting infrastructure is in place.

Some challenges that organizations need to plan for when performing lift-and-shift exercises revolve around performance and legacy technology support in Azure. This sandboxed environment provides a functional way to perform operating system upgrades or application framework patches in order to assess their impact before performing any production migration.

Some applications were specifically written to take advantage of physical hardware and virtualization solutions. On-premises systems were able to mimic these hardware traits or map them directly into a virtual machine. This sandbox environment also provides the ability to performance-test the application and ensure that it meets the organization’s needs when running in Azure.

When migrating custom line-of-business applications in a lift-and-shift manner, consider any support contracts in place for the application. This becomes important as vendors who support the application might not extend their support to the cloud, instead requiring the organization to take a different approach—like modernizing or upgrading.



APP MIGRATION STORY

Planzer

Planzer, one of the largest transportation and logistics companies in Switzerland, was operating on-premises hardware that was very outdated. When the company decided that this costly system needed an upgrade, it turned to Azure. From the beginning of data collection to the last migrated server, Planzer moved 200 servers to Azure in about seven months.

[See how they did it](#)



Microsoft provided by far the best migration tool to migrate the virtual servers to its cloud.

—PHILIPP WITSCHI
PLANZER CONSULTANT, SOFTWAREONE

Modernize apps

Most custom line-of-business applications have a two- or three-tier architecture comprising a database layer, a business logic layer, and a front-end layer. The last two layers are sometimes collapsed into one server, causing the architecture to appear to be two-tier.

There are multiple choices in terms of modernizing a system when there are three layers collapsed onto two servers. For example, if the front-end layer is a stateless web layer, it could be packaged as an Azure Web App (see the [App Service Migration Assistant](#)) or a Container (see the [Containerization Guide](#)). Rehosting the front-end layer of this three-tier application in Azure enables organizations to take full advantage of Azure's

scale, security, load balancing, and geographic resiliency features—often with no code changes required.

The database layer could be migrated to either an Azure SQL Managed Instance or an Azure SQL Database. This becomes possible with tools such as the Azure Database Migration Service, which can be mixed with other Azure technologies to help modernize the solution.


Modernizing can also mean code refactoring, an example of which would be taking each layer and doing the necessary work to break it out into decoupled microservices.



APP MODERNIZATION STORY

O2 Czech Republic

O2 Czech Republic, the leading telecommunications company in the Czech Republic, offers a digital television platform showcasing live sports and video on demand. To scale and keep pace with growth, the company decided to move workloads from an on-premises infrastructure to the cloud and modernize the process. They not only improved performance and scalability, but they also saved 30 percent TCO per workload.

[See how they did it](#) 



We teamed up with Microsoft to deliver a more agile, scalable, and cost-effective environment. We've achieved success with all of our cloud goals and are excited to continue the trajectory with Azure.

—MARTIN KOZISEK
TRANSFORMATION MANAGER, O2 CZECH REPUBLIC

Migrate/upgrade apps

Custom line-of-business applications are generally a significant investment for organizations, from the design and construction of the software to modifying business practices, and even to the support teams put in place to keep them running, right down to the software training provided to the staff. All applications have a natural (and in some cases, overextended) life cycle.

During the planning and assessment of each workload, the application should be upgraded to the latest version available, or migrate to a different, more modern application like a SaaS. This implies a substantial investment for the organization, but the investment needs to be compared against running the custom line-of-business application (if possible) in the cloud in its original, archaic state.

The client experience

Custom line-of-business applications are often designed to be tightly coupled. This coupling usually only includes the server tiers, but it can also include the client access layer. Modernizing the client layer is often very difficult, so organizations have two options: *Session Host Virtualization* or *Virtual Desktop Infrastructures*, either of which will allow the application interface to be brought to the cloud in its tightly coupled nature, while also providing a usable experience to consumers of the application.

Decoupling a physical desktop and migrating the applications to one of those infrastructures simplifies security and application management for an organization and can aid in reducing the capital investment required for infrastructure on the desktop estate.



MIGRATION SUCCESS STORIES

Azure migration helps TomTom achieve high availability

TomTom navigation services' IT infrastructure needed to scale in order to meet customer demand. They worked with Microsoft to migrate from on-premises to the cloud and modernize their applications with Azure. More than just a lift-and-shift, TomTom needed a cloud solution that could help with a massive migration and overhaul while not affecting real-time app performance.

[See how they did it](#)



Avianca's cloud journey takes wing with Azure VMware Solution

Over the course of more than a century of operation—including mergers with other airlines—South American airline Avianca accumulated legacy applications that, while key to company operations, were not optimized for the cloud computing that offers the ROI and elasticity advantages they needed.

[See how they did it](#)



Migrating applications from independent software vendors (ISVs) to Azure

Traditionally, IT teams migrate partner applications by installing the latest version of the application on the latest supported version of the server, using vendor-specific tools. With Azure, new migration alternatives can speed up and secure migration for select third-party applications.

Many key Microsoft partners are moving their solutions natively to Azure. SAP HANA, Adobe, Citrix, and other partners offer Azure-based solutions that combine the power of the Azure cloud with the unique functionalities of each application. The

Azure Marketplace offers hundreds of Azure-native solutions, covering a broad range of business and technology applications.

Many on-premises applications can safely be migrated to Azure using the same techniques used for LOB applications: migrating the server instance from an on-premises physical or virtual machine into an Azure Virtual Machine, then taking advantage of Azure networking and security features to tie it to on-premises resources. This may be a valuable option if an application vendor has not yet produced a native version of Azure.

Migrating server roles to Azure

The investments you've already made can be extended to Azure. The table below shows solution mapping for on-premises to cloud services—for any migration scenario, from hybrid infrastructure to full modernization and refactoring.

Detailed examples of workload and application migration are in the [Resources](#) appendix.

	On-premises	Transform with Azure	
	Upgrade on-premises	Migrate as-is Rehost data and apps	Migrate and modernize Refactor, rearchitect, rebuild
Custom LOB apps			
Databases	SQL Server 2022 <ul style="list-style-type: none"> Azure Arc for Data Services Azure Stack HCI 	AzureVM with Database <ul style="list-style-type: none"> Azure SQL Managed Instance PostgreSQL on Azure MySQL on Azure 	AzureVM with Database <ul style="list-style-type: none"> Azure SQL Managed Instance PostgreSQL on Azure MySQL on Azure
Microsoft apps			
Office workloads	Office 365, SharePoint, Exchange, Teams		
Remote desktop server	Windows Server 2022	Move RDS role to Azure Windows Server VM	Citrix-hosted VDI solution (Azure Marketplace)

ISV app			
ISV app	Latest version of Windows Server the app supports	Azure-hosted app (Azure Marketplace)	SaaS packaged apps (Azure Marketplace)
Server roles			
ID, DNS, and DHCP	Windows Server 2022	Deploy Microsoft Entra ID and DNS servers in Azure	Microsoft Entra ID and Microsoft Entra Domain Services
		Windows Server VMs	Azure DNS
RDS	Windows Server 2022 <ul style="list-style-type: none"> Azure Virtual Desktop for Azure Stack HCI 	Windows Server VMs	Azure Virtual Desktops
VPN/RRAS	Windows Server 2022	Windows Server VMs	
File services	Windows Server 2022	Azure File Services and Azure Storage Migration Service	Sync with Windows Server
Virtualization	Azure Stack HCI	Azure IaaS	Azure PaaS/SaaS
Hybrid (partial migration) enabled by Azure Arc	<ul style="list-style-type: none"> Windows Server 2022 Legacy Windows apps SCCM, Windows Admin Center Kubernetes 		<ul style="list-style-type: none"> Azure IaaS Azure portal Azure Kubernetes Service (AKS)

Microsoft Entra ID:

Working across on-premises, cloud, and hybrid environments, Microsoft Entra ID provides all necessary security and reliability improvements, without requiring the purchase or deployment of new hardware.

DNS:

Migrating DNS provides several challenges, depending on how DNS is used in an organization. It is possible to bring up a DNS infrastructure with virtual machines and extend the number of servers available to query, but organizations can also replace existing on-premises DNS servers with Azure DNS to provide robust name resolution across environments. Modernizing existing workloads provides the service, features, and security improvements of Azure deployments and reduces operating overhead.

File services:

There are a variety of different options when migrating this crucial role to Azure; organizations have a choice of OneDrive for Business, SharePoint Online, or Microsoft Teams. Another option is Azure Files, which provides server message block (SMB) storage directly mounted into a server. If performance is key to file storage, premium shares can be utilized for IO-intensive workloads. Combine this with Azure File Sync to migrate files to

Azure Files and create a local cached version on-premises for users to access. Azure File Sync will maintain connectivity and replicate between on-premises and Azure Files.

Remote Desktop Service:

[Remote Desktop Services](#) allows for centralizing an application estate to servers, simplifying application deployment, manageability, and access. Azure provides a unique opportunity through Azure Virtual Desktop, which allows application estates to be hosted in the cloud and gives users the same feel and experience with which they are already comfortable. The true power of Azure Virtual Desktop lies with the broad connectivity options Azure provides, as well as the dynamically scalable solutions that Azure Virtual Desktop supports. Organizations can quickly adapt and operate productively on any client, from any location with a stable internet connection.

Microsoft has the tools and platform capabilities in Azure to support running server estates. Planning is key; taking a role-by-role approach to migrating within the Cloud Adoption Framework is a proven method. Microsoft understands that no two IT departments are the same, and that taking the time to understand what's available in Azure gives businesses the confidence to operate successfully.

The Azure Stack family

A common concern with public cloud infrastructures is how they conflict with organizational policy, regulations, and IT personnel preference. The list of reasons why workloads can't be run in the public cloud can be exhaustive; Azure Stack allows organizations to extend Azure services, APIs, and capabilities to hardware controlled in the datacenter, branch offices, and edge locations. Azure Stack HCI is available to meet a variety of deployment scenarios:

- HCI is the best option for modernizing on-premises software for integration with Azure; it is ideal for branch critical workloads and running cloud native applications on prem by leveraging AKS Hybrid. Azure Stack HCI is also Arc enabled providing a perfect way to extend on-premises management plane to Azure.



Azure Stack Hyperconverged Infrastructure (HCI)

Azure Stack HCI is the best option for modernizing on-premises software and integrating it with Azure. Azure Stack HCI is a hyperconverged infrastructure operating system from Microsoft, delivered as an Azure hybrid service in partnership with Microsoft's OEM partners. With Azure Stack HCI, Windows and Linux virtual machines run on-premises with modern, industry leading price-performance HCI solutions from Microsoft OEMs, leveraging existing tools, processes, and skillsets with DevOps, APIs, and services identical to Azure.

In addition to these advantages, organizations can securely manage and deploy applications on-premises and in the cloud with AKS on Azure Stack HCI. One control pane manages the entire AKS life cycle, with end-to-end management—covering setup, deployment, management, and patching—of the containerized application life cycle. AKS on Azure Stack HCI is hybrid by design, with built-in Azure Arc capability, which means all AKS and Kubernetes deployments can be managed from Azure, and the same containers deployed on AKS alone can be deployed on AKS on Azure Stack HCI. AKS also supports both Windows and Linux containers, with edge local administration, with the Windows Admin Center and global cloud management accessible via the Azure Portal.

Conclusion

Azure offers a path to the cloud that meets any business requirements, with cost-effective options for every organization. With learning resources, tools to assess and plan migration, and expert assistance at every stage, Azure can help companies:



Migrate to achieve efficiency and optimize costs. Migrate any workload to Azure to increase agility and resiliency, achieve cost savings, and scale up or down to meet business needs.



Innovate anywhere with cloud services. Take advantage of cloud services when needed by extending Azure to on-premises, multicloud, and edge environments.



Build for the future with cloud-based infrastructure and operations. Create new opportunities for any business with a cloud-based infrastructure that helps innovate and build for the future.



Stay compliant and protect against security threats. Strengthen the security posture of cloud resources and protect multicloud and hybrid workloads.



Take the next steps

- [Create an Azure free account and get US \\$200 credit to use within your first 30 days](#)
- [Get training, best practices, and support at every stage with the Azure Hero Offerings](#)
- [Simplify migration and modernization with Azure Migrate](#)
- [Get in touch with Azure Sales for questions, solutions, and pricing](#)

Align foundation

- [Align foundational decisions](#)
- [Learn how Azure works](#)
- [Understand fundamental concepts](#)
- [Establish a portfolio hierarchy](#)

Establish teams

- [Align an organization](#)
- [Determine the need for a cloud strategy team](#)
- [Build a cloud adoption team](#)
- [Build a cloud governance team](#)
- [Build a cloud operations team](#)

Accelerate adoption

- [Migrate existing workloads into the cloud](#)
- [Build new products and services in the cloud](#)
- [Design and configure a successful environment](#)

Migrate server workloads

- [Move on-premises Remote Desktop Services to Azure Virtual Desktop scenario](#)
- [Review Azure Blueprints](#)
- [Run production workloads with Azure Stack HCI](#)

Improve controls

- [Deliver operational excellence during cloud transformation](#)
- [Manage enterprise costs](#)
- [Improve reliability controls](#)
- [Ensure performance](#)

General

- [Utilize Cloud Adoption Framework training](#)
- [Review common migration examples for Azure](#)
- [Rehost an on-premises application on Azure VMs by using Azure Migrate](#)
- [Assess web apps and migrate them with App Service Migration Assistant](#)